

Remarks

The Office Action mailed February 3, 2005 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-19 are now pending in this application, of which claims 1, 2, 6, 8-10, 12, and 15-17 have been amended. Claim 20 has been cancelled. It is respectfully submitted that the pending claims define allowable subject matter.

The objection to claims 17 and 20 is respectfully traversed. Claim 17 has been amended for clarity and claim 20 has been cancelled. Applicant accordingly requests that the objection to claims 17 and 20 be withdrawn.

The rejection of Claims 1, 2, 4-6, 8-10, 12 and 14 35 under U.S.C. § 102(b) as being anticipated by Consoli et al. (U.S. Patent No. 6,176,738) is respectfully traversed.

Consoli et al. describe a blind mate panel mount connector system, including a shroud having keying flanges and a skirt that engage a panel cutout. It is clear from Figures 10-15 that the keying flanges extend from and at a top edge of the shroud, and the skirt is spaced from the keying flanges and the top edge. A latch member (130) is provided that is spaced from the top edge and extends upwardly toward the top edge to engage a downwardly facing free end (184) of the panel cutout. The latch member (182) may be deflected to unmount the connector from the panel for service and repair.

Amended claim 1 recites a low profile electrical connector comprising "a shroud comprising opposed side walls configured to retain a plurality of contact pins, said side walls having opposed end edge," a skirt joined to and extending from one of said opposed end edges, said skirt comprising a latch member extending away from said one end edge," and "keying flanges extending from said side walls at a location spaced from said skirt."

Consoli et al. neither describe nor suggest the connector of claim 1. The skirt of the Consoli et al. connector is not joined to an end edge of the shroud, but rather is spaced between the top and bottom edges of the shroud. The keying flanges are not spaced from the end edge of

the shroud of the Consoli et al. connector, but rather are positioned on the end edge of the shroud. The latch member (182) of the Consoli connector does not extend away from the end edge of the shroud as claim 1 recites. Consoli et al. consequently does not disclose the invention of claim 1.

It is further submitted that Consoli et al. is not suggestive of the connector of claim 1. Consoli et al. describes matable plug and receptacle connectors that are each engaged to a respective panel. If the keying flanges of one or both of the plug and receptacle connectors were moved to the end edges of the connector, mating of the connectors would become much more difficult, and the blind mate advantages of the connectors would be compromised. The teaching of Consoli et al. is therefore submitted to be incompatible with the present invention.

For at least the reasons set forth above, Claim 1 is therefore submitted to be patentable over Consoli et al.

Claims 2 and 4-6 depend from claim 1, and when the recitations of claims 2 and 4-6 are considered in combination with the recitations of claim 1, claims 2 and 4-6 are likewise submitted to be patentable over Consoli et al.

Moreover, the tapered flanges of claim 2 are not described or suggested by Consoli et al. It is clear from the Figures of Consoli et al. that the keying flanges of the Consoli et al. connectors are not tapered or inclined relative to the skirt to define a decreasing space between the skirt and a tapered surface along a length of the keying flanges, the length extending parallel to a longitudinal axis of said shroud. The Consoli et al. flanges are not sloped along a length parallel to the longitudinal axis of the connector. Further, Consoli et al. describes that the plug and receptacle connectors float with respect to the panels to facilitate mutual alignment of the connectors, and the tapered flanges as recited in claim 1 would frustrate this function.

Additionally, claim 6 recites that the latch member locks the skirt to a cover and prevents removal of the skirt from the cover. Consoli et al. describes latches that prevent the connectors from inadvertently moving to an initially inserted position. Consoli et al. describe that the connectors may be unmounted from the panels for service and repair by deflecting the connector latch or a deflectable portion of the cutout to release the connector from the panel. The Consoli

et al. latches are therefore not fairly characterized as preventing removal of the skirt from the cover as claim 6 recites.

Claim 8 recites an electrical connector for a low profile electronic device having an outer surface, said connector comprising: “a shroud configured to retain a plurality of contact pins between opposed said side walls each having a top edge and a bottom edge, each of said side walls comprising a keying flange spaced from the top and bottom edges for installing said shroud to the outer surface,” and “a skirt extending from said top edge of said opposed side walls, said skirt slidably engaging and locking the outer surface of the electronic device between the keying flanges and the skirt when said connector is installed, wherein the keying flanges are concealed within the electronic device and the skirt may not be removed.”

As note above, Consoli et al. neither describes nor suggest a connector shroud having a skirt extending from a top edge, and keying flanges spaced from the top and bottom edges. Rather, Consoli et al. describes just the opposite, namely a connector having keying flanges at the top edges and a skirt spaced from the top and bottom edges. Also, Consoli et al. neither describe nor suggest that the keying flanges are concealed within the electronic device and that the skirt may not be removed when the connector is installed. Consoli et al. teaches accessible deflectable latching arrangements wherein the connectors may be removed from the panels for service and repair.

Claim 8 is therefore submitted to be patentable over Consoli et al.

Claims 9, 10, 12 and 14 depend from claim 8, and when the recitations of claims 9, 10, 12 and 14 are considered in combination with the recitations of claim 8, claims 9, 10, 12 and 14 are likewise submitted to be patentable over Consoli et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 1, 2,4-6, 8-10, 12, and 14 be withdrawn.

The rejection of claims 3, 7, 11 and 13 under 35 U.S.C. § 103 as being unpatentable over Consoli et al. in view of Berg et al. (U.S. Patent No. 6,312,285) is respectfully traversed.

Claims 3, 7, 11 and 13 are dependent claims of claims 1 and 8, which are respectfully submitted to be patentable over Consoli et al. for the reasons set forth above. Berg et al. is respectfully submitted to add nothing to the Consoli et al. reference with respect to the inventions of claims 1 and 8 and does not cure the deficiencies of Consoli et al. with respect to claims 1 and 8. Claims 1 and 8 are therefore submitted to be patentable over Consoli et al in view of Berg et al., and when the recitations of claims 3, 7, 11, and 13 are considered in combination with the recitations of claims 1 and 8, claims 3, 7, 11, and 13 are likewise submitted to be patentable over Consoli et al in view of Berg et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 3, 7, 11 and 13 be withdrawn.

The rejection of Claims 15, 16, 18 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Berg et al. is respectfully traversed.

Claim 15 has been amended for clarity and now recites, an electrical device comprising “a circuit board,” “an outer cover extending over said circuit board, said cover comprising an opening therein, said opening having a keyed contour,” “an interface connector comprising a shroud configured to be inserted through the opening in said outer cover, said shroud configured to receive a mating plug and having a plurality of keying flanges corresponding to said keyed contour when said shroud is inserted through said cover, and a skirt joined to a top edge of said shroud, said skirt extending outward from said cover and resting upon an outer surface of said cover when said shroud is inserted through said cover, said skirt and said flanges resiliently retaining and locking said cover therebetween to prevent removal of the connector from said cover, wherein said keying flanges are concealed beneath the cover,” and “a plurality of spring loaded pins received in said shroud and in electrical contact with said circuit board.”

Berg et al. do not describe or suggest the device of claim 15. Specifically, Berg et al. do not describe a skirt joined to a top edge of a shroud and engaging a cover between the skirt and the shroud. Berg et al. disclose a connector (10) mountable to a panel opening (12). The

connector includes a housing (20) having stop flanges (38) that are clearly spaced from the top and bottom ends of the housing where they engage the panel (14). Berg et al. nowhere describe that the locating flanges (34) are concealed when the connector is installed.

Claim 15 is therefore submitted to be patentable over Berg et al.

Claims 16, 18 and 20 depend from claim 15 and when the recitations of claims 16, 18 and 20 are considered in combination with the recitations of claim 15 as to Berg, claims 16, 18 and 20 are likewise submitted to be patentable over Berg et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 15, 16, 18 and 20 be withdrawn.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 15, 16, 18 and 20 be withdrawn.

The rejection of Claims 17 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Berg et al. in view of Consoli et al. is respectfully traversed.

Claims 17 and 19 depend from claim 15 which is submitted to be patentable over Berg et al. as described above. Consoli et al. does not cure the deficiencies of Berg et al. with respect to claim 15. Claim 15 is therefore submitted to be patentable over Berg et al. in view of Consoli et al.

When the recitations of claims 17 and 19 are considered in combination with the recitations of claim 15, claims 17 and 19 are likewise submitted to be patentable over Berg et al. in view of Consoli et al.. For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of claims 17 and 19 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully submitted,



Bruce T. Atkins
Armstrong Teasdale, LLP
One Metropolitan Square
Suite 2600
St. Louis, Missouri 63102
314-621-5070